

CallPilot

Installation and Configuration

Part 1: Installation Flowchart and Worksheets

Product release 1.07

Standard 1.0

May 2000



How the world shares ideas.

CallPilot

Installation and Configuration

Part 1: Installation Flowchart and Worksheets

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Standard 1.0 of *CallPilot Installation and Configuration*,
Part 1: Installation Flowchart and Worksheets is released.

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Chapter 1

Getting ready

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Overview

Introduction

CallPilot Part 1: Installation Flowchart and Worksheets provides a high-level overview of the steps required to install a new CallPilot system, recover a CallPilot system, and upgrade and expand the server software. Worksheets are provided to help you set up and install a CallPilot system.

Who should read this guide

This guide is for distributors, technicians, and engineers responsible for installing and setting up a CallPilot server.

What's new in this book

- All documentation relating to installation and configuration (including maintenance and diagnostics) has been combined into a new binder format that holds standard paper. This allows you to insert updates easily. Updates are available from the following web site:
<http://www.nortelnetworks.com/nic>
- The Server Software Installation procedure is new in this release. It features a Configuration Wizard that combines many separate configuration steps into an easy-to-follow wizard dialog.
- In addition to the Meridian 1 family of switches, CallPilot now supports the following families of switch types: MSL-100/DMS-100, Matra, Lucent, Mitel, and Rolm.
- The Client Software Installation procedure is new in this release. It also has a new appearance, including an installation list on the left side of the screen that highlights the installation steps as they occur.
- The installation process is faster than those of previous releases. It should take approximately three hours for you to install all components.
- A new user interface, the CallPilot Administration Client Explorer, replaces the MAT Navigator.
- A new user interface, the CallPilot Administration Client window, replaces the SMI window.
- The Client Checking Tool used in the previous release of CallPilot is no longer required. The software incompatibilities are now resolved in the installation software.
- There is a new Add CallPilot System wizard for connecting your client and your servers.

Skills you need

Introduction

This topic describes the skills and knowledge you need to use this guide effectively.

Switch technology knowledge

You need knowledge of, or experience with, the switch that is connected to the CallPilot server.

PC experience or knowledge

Knowledge of, or experience with, the following PC products is required before beginning the CallPilot installation:

- Microsoft Windows 95 and 98
- Microsoft Windows NT
- client/server architecture
- TCP/IP protocols

Additional experience or knowledge

Experience or knowledge in the following related areas is recommended:

- networking
- troubleshooting
- programming
- database management

Symbols and conventions

Introduction

This section describes the symbols and conventions used in this guide.

Symbols

You might encounter the following symbols in this manual.



DANGER

Risk of electric shock

Warns you of an immediate electrical hazard which, if not avoided, will result in shock, serious injury, or death.



WARNING

Risk of personal injury

Warns you of a situation in which you can be injured if instructions are not followed exactly as stated.



CAUTION

Risk of equipment damage

Alerts you to situations where data can be lost or damaged, equipment can be damaged, actions can result in service interruption, and productive time can be lost.

ATTENTION

Provides information essential to the completion of a task.

Note: Describes the secondary results of procedures or commands, or special conditions under which a procedure or command must be used.

Choosing commands for procedures

For many procedures in this guide, there are several ways you can perform the same task. For example, to copy text, you can choose any of the following methods:

- Choose Copy from the Edit menu.
- Click Copy on the toolbar.
- Type the keyboard shortcut Control+C.

This guide uses the first method.

Related information products

Introduction

The following list of CallPilot technical documents are stored on the CD-ROM that you receive with your system. You can search the entire suite of documentation online, or you can print part or all of a guide.

Planning and engineering guides

Use these guides before you install CallPilot to help plan your system, and to plan a migration of data from Meridian Mail to CallPilot.

Document titles

Planning and Engineering Guide

Meridian Mail to CallPilot Migration Utility Guide

Installation and configuration guides

These guides describe how to install hardware and software for the CallPilot server, client, and desktop messaging. Instructions for configuring the switch are also provided.

Document titles

200i Installation and Configuration Guide

702t Installation and Configuration Guide

1001rp Installation and Configuration Guide

Desktop Messaging Software Installation and Maintenance Guide

Administration guides

These guides provide specialized information to help you configure CallPilot, administer and maintain it, and use its features.

Document titles

Getting Started Quick Reference Card

Administrator's Guide

Reporter Guide

Application Builder Guide

Monitoring and Security for the Administrator

Networking guides

These guides describe how to plan, install, set up, and troubleshoot networking services.

Document titles

Network Planning Guide

AMIS Implementation and Administration Guide

Integrated AMIS Implementation and Administration Guide

NMS Implementation and Administration Guide

Enterprise Implementation and Administration Guide

VPIM Implementation and Administration Guide

End user guides

These guides are intended for end users of CallPilot, such as phoneset users and desktop messaging users.

Document titles

Multimedia Messaging User Guide

Speech Activated Messaging User Guide

Desktop Messaging Quick Reference Guide

Troubleshooting reference

This reference provides step-by-step troubleshooting procedures for CallPilot.

Document title

CallPilot Troubleshooting Reference

Using the online Help, guides, and tutorials

CallPilot contains three online sources for information:

- Online Help provides brief answers to the questions “What’s this?” and “How do I...?”
- Online guides provide detailed conceptual information, as well as information on how to perform detailed tasks.
- Online tutorials provide a complete product overview, as well as specific information on how to use Application Builder.

You can access all information using either the Help menu or Help buttons.

Contacting technical support

Contact your distributor’s technical support organization to get help with troubleshooting your system.

Contacting Nortel Networks

If you have comments or suggestions for improving CallPilot and its documentation, contact Nortel Networks at the following web site address:

http://www.nortelnetworks.com/callpilot_feedback

Chapter 2

Installing a new CallPilot system

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Overview

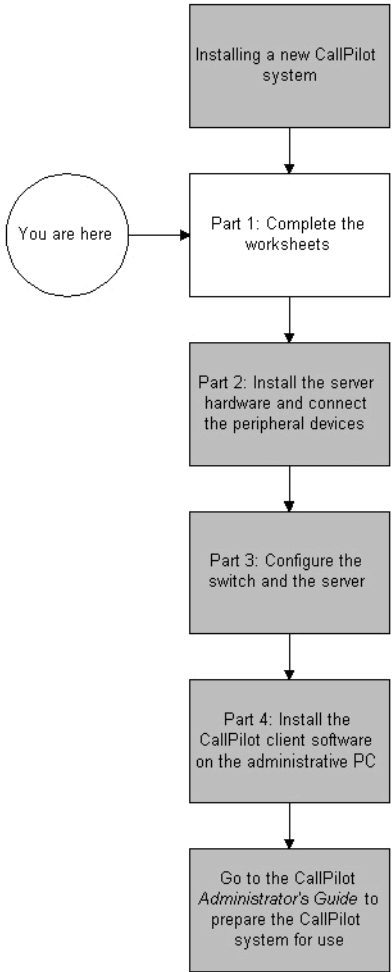
Introduction

The CallPilot server is prepared at the factory and then set up and configured at the customer site. This chapter describes the steps you need to follow to set up and configure your server, switch, and administrative PC to work with CallPilot.

Installing CallPilot

Introduction

The CallPilot installation process is divided into four steps. Each step is covered in a separate part of this binder. A fifth part in this binder covers maintenance and diagnostics of the server. The following flowchart shows the installation process as it is presented in this book.



Step 1 (covered in this part)

Complete the “Installation and upgrade worksheets” on page 44.

Step 2 (install the server hardware)

Unpack and inspect the server. Install hardware that was shipped uninstalled. Refer to Part 2 in this Installation binder.

Step 3 (configure the switch and server)

Complete the “Switch programming worksheets” on page 38. Program the switch. Connect the server to the switch and the network (if applicable). Configure the server software. Refer to Part 3.

Step 4 (install the Administration Client PC)

Check that the PC you have selected is compatible with the CallPilot client software. Install the CallPilot client software. Confirm that the CallPilot system is working properly. Refer to Part 4.

Step 5 (maintain the server)

Diagnose server hardware problems. Install the Windows NT and CallPilot software if necessary for recovery. Upgrade the CallPilot software. Refer to Part 5.

Chapter 3

Installing server software for recovery purposes

In this chapter

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Overview

Introduction

The operating system and server software is preinstalled at the factory. This chapter describes the steps you need to follow to recover your CallPilot system should the server software not work properly or should your support representative indicate that a new install is required.

Installing the operating system and CallPilot, if necessary

Introduction

The following table outlines the tasks (and related chapters) you need to perform to install the software.

Task	Refer to	Comments
1. Install the Windows NT operating system	"Installing operating system software" in Part 5	
2. Install the CallPilot software	"Installing the CallPilot server software" in Part 5	
3. Install PEPs	"Installing Performance Enhancement Packages (PEPs)" in Part 5	
4. Install switch connectivity software (for Lucent, Mitel, Rolm, MSL-100/DMS-100 switches)	"Installing the CallPilot server software" in Part 5	

Task	Refer to	Comments
5. Run the Configuration Wizard	Part 3, Chapter 6, “Configuring the server software-common dialog boxes for all switch types” and Part 3, Chapter 7, “Configuring the server software—switch-specific dialog boxes”	Use the data recorded in “Installation and upgrade worksheets” on page 44.
6. Change the default Windows NT passwords	Part 3, Chapter 8, “Changing the CallPilot server Windows NT default passwords”	
7. Configure Remote Access Service and pcANYWHERE32	Part 3, Chapter 9, “Configuring Remote Access Service” and Part 3, Chapter 10, “Preparing the server for remote access with pcANYWHERE32”	
8. Test that CallPilot is operational	Part 3, Chapter 11, “Verifying that CallPilot can receive calls”	

Chapter 4

Upgrading the software

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Overview

Introduction

The process of upgrading the CallPilot software involves replacing the software with a higher numbered release.

The upgrade procedures for both the CallPilot server and client are outlined in this binder.

Upgrading the CallPilot software

General Release Bulletin

It is important that you review the latest General Release Bulletin (GRB) for special instructions, before starting the upgrade.

Upgrading CallPilot server and client

Use the following table to determine the parts of this binder that you need to reference for upgrading the CallPilot client and server.

Task	Refer to	Comments
1. Upgrade the CallPilot client	Part 4, Chapter 2, "Upgrading the client on the administrative PC"	
2. Review the pre-upgrade checklist	"Upgrading CallPilot server software" in Part 5	
3. Check the validity of the keycode and serial number	"Upgrading CallPilot server software" in Part 5	Record these values on the "Installation and upgrade worksheets" on page 44.
4. Disable the DSP and DS30 channels	"Upgrading CallPilot server software" in Part 5	
5. If upgrading from 1.0 to 1.07, install Service Pack 5	"Installing WinNT 4.0 Service Pack 5" in Part 5	
6. Upgrade the server	"Upgrading CallPilot server software" in Part 5	

Task	Refer to	Comments
7. Install PEPs	“Installing Performance Enhancement Packages (PEPs)” in Part 5	
8. Run the Configuration Wizard	“Upgrading CallPilot server software” in Part 5	Use the data recorded in “Installation and upgrade worksheets” on page 44.
9. Enable DSP and DS30 channels	“Upgrading CallPilot server software” in Part 5	
10. Test that CallPilot is operational	Part 3, Chapter 11, “Verifying that CallPilot can receive calls”	

Chapter 5

Expanding the server software

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Overview

Introduction

When you expand the CallPilot software, you add features or additional languages to the CallPilot system.

Expanding the CallPilot server software

Expanding CallPilot features

Use the following table to determine the parts of this binder that you need to reference for expanding features or languages.

Task	Refer to	Comments
1. Install any additional hardware (if required)	"Performing hardware maintenance" in Part 5	
2. Run the Configuration Wizard	<p>Part 3, Chapter 6, "Configuring the server software—common dialog boxes for all switch types"</p> <p>and</p> <p>Part 3, Chapter 7, "Configuring the server software—switch-specific dialog boxes"</p> <p>Note: Follow the instructions in Chapter 7 only if you added new channels to your CallPilot system.</p>	<p>For the most part, running the Configuration Wizard involves accepting the default values displayed on the screen.</p> <p>The only dialog boxes for which you will need to enter data are the</p> <ul style="list-style-type: none"> - Keycode and Serial Number dialog box - Media Allocation dialog box (if you add new channels) - Language dialog boxes (if you add a new language)
3. Test that CallPilot is operational	Part 3, Chapter 11, "Verifying that CallPilot can receive calls"	

Chapter 6

Worksheets

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Switch programming worksheets

Where this information is used

You need the data that you collect in this section when you program the switch (described in Part 3 of this binder). Nortel Networks recommends that you program the switch and prepare the cabling ahead of the installation date.

Sources for this information

You need information from the customer's switch administrator and network administrator.

Meridian 1-specific information

Complete the following table as preparation for programming the Meridian 1 switch. Refer to Part 3, Chapter 3, “Switch Programming” for instructions on how to program the Meridian 1 switch.

Field	Data
Switch IP address	
Switch Type (M1 or Option 11)	
Switch Customer Number	
Customer number	
Primary CDN (voice messaging)	
Secondary CDN (multimedia messaging)	
ACD queue and agents	
ACD-DN of CallPilot agents	
ACD-DN of default DN for CDN	
TN of agent	
Position ID on Key0	
SCN on Key1	
Phantom DN's (for each CallPilot application)	
Superloop	
DN	
Application	
DCFN DN (associated with the CDN)	

MSL-100/DMS-100 specific information

Complete the following table as preparation for programming the MSL-100/DMS-100 switch. Refer to Part 3, Chapter 3, “Switch Programming” for instructions on how to program the MSL-100/DMS-100 switch.

Field	Data
UCD DN for voice messaging	
UCD DN for multimedia messaging (if purchased)	
UCD DN for speech recognition (if purchased)	
For each channel	
UCD DN	
DN of agent	
Message Desk Number	
Terminal Number	
Login Code	
Logout Code	
Service DN	
Associated application	
SMDI Link	
Baud Rate	9600 is the recommended default.

Lucent, Mitel and Rolm specific information

Complete the following table as preparation for programming the Lucent, Mitel, or Rolm switches. Refer to Part 3, Chapter 3, “Switch Programming” for instructions on how to program the Lucent, Mitel, or Rolm switch.

Field	Data
CallPilot ports or DNs	
Primary service DN	
Internal Extension length	
MWI Line DN	
Smallest extension DN and largest extension DN	
Number of channels	
Hunt Groups	
Primary Hunt Group DNs	
Secondary Hunt Group DNs	

Matra specific information

Complete the following table as preparation for programming the Matra switch.
Refer to Part 3, Chapter 3 “Switch Programming ” for instructions on how to
program the Matra switch.

Field	Data
Primary CDN	
Hookflash time	
INDNLength	
MWI line	
First DN - Last DN	
Hunt Groups	
Hunt Group DN	
AgentDN	
TermNum	
Number of channels	
Hunt Group DN	
AgentDN	
TermNum	
Number of channels	
Hunt Group DN	

Field	Data
AgentDN	
TermNum	
Number of channels	

Installation and upgrade worksheets

Where this information is used

You need the data that you collect in this section when you run the Configuration Wizard as part of the installation from scratch and upgrade processes.

Note: The Configuration Wizard chapters in Part 3 of this binder provide screen captures and field explanations. Read these chapters to help you complete the following tables.

Sources for this information

You need information from the customer's switch administrator and network administrator.

Configuration Wizard information required for all switch types

Field	Data
Keycode	
Serial Number	
Company Name	
Customer Name	
Computer Name	
Area Code (for the server location)	
Country Code (for the server location)	
DSP Encoding Select the appropriate type for your region. For example: <ul style="list-style-type: none"> ■ Select A-law for systems in Europe ■ Select Mu-law for systems in North America 	
Primary DN (for voice messaging)	
Primary language	
Secondary language	
Speech recognition language	
Networking	Select one of <ul style="list-style-type: none"> ■ Enterprise Networking ■ AMIS Networking ■ VPIM Networking <p>Note: Once you select a networking feature, it cannot be removed.</p>

Meridian 1 specific information for the Configuration Wizard

Field	Data
Switch IP address	
Switch Type (M1 or Option 11)	
Switch Customer Number	
Number of TNs	
Start TN	
Start TN Key 0 (Position ID)	
Start TN Key 1 (SCN)	
Equipment LAN TCP/IP Information	
IP address	
Subnet mask	
Customer LAN TCP/IP information	
IP address	
Subnet mask	
Gateway	

MSL-100/DMS-100 specific information for the Configuration Wizard

Field	Data
Poll Timeout Default: 10 000	
Poll Timeout Threshold Default: 5	
Port Name	Note: Prefilled as COM 2 and cannot be changed.
MWI Padding Default: blank	
Poll DN Default: 0	
Frame Format	Note: Only D4 is supported. D4 is the default.
Coding Format	Note: Only B8ZS is supported. B8ZS is the default.
(T1) Cable Length Default: None	
Debounce Value Default: 13	
Hook Flash Time Default: 50	

Field	Data
UCD group for Voice channels, if Voice channels were purchased	
Number of Channels (in this UCD group)	
Agent DN	
Hunt Group DN (UCD DN)	
Msg Desk	
Term Num	
Login Code	
Logout Code	
InDNLength	
UCD group for Fax channels, if Fax channels were purchased	
Number of Channels (in this hunt or UCD group)	
Agent DN	
Hunt Group DN (UCD DN)	
Msg Desk	
Term Num	
Login Code	
Logout Code	
InDNLength	

Field	Data
UCD group for Speech Recognition channels, if Speech Recognition channels were purchased	
Number of Channels (in this hunt or UCD group)	
Agent DN	
Hunt Group DN (UCD DN)	
Msg Desk	
Term Num	
Login Code	
Logout Code	
InDNLength	
Customer LAN TCP/IP information	
IP address	
Subnet mask	
Gateway	

Lucent, Mitel, and Rolm specific information for the Configuration Wizard

Field	Data
Maximum Internal Extension Length	
Hunt group for Voice channels, if Voice channels were purchased	
Number of lines to add (for this hunt group)	
First DN	
Hunt Group DN	
Hunt group for Fax channels, if Fax channels were purchased	
Number of lines to add (for this hunt group)	
First DN	
Hunt Group DN	
Hunt group for Speech Recognition channels, if Speech Recognition channels were purchased	
Number of lines to add (for this hunt group)	
First DN	
Hunt Group DN	

Field	Data
To assign the MWI DN to a separate hunt group	
Number of lines to add Note: Enter 1 (for 1 MWI DN).	
First DN Note: Enter the MWI DN (usually the DN for the last digital set defined for CallPilot).	
Hunt Group DN Note: Enter a DN that will not be in use.	
Set Feature Code	
Clear Feature Code	
Message Waiting Indicator (for Mitel and Rolm switches that use Feature Access Codes for MWI activation)	
MWI Activation Method	Preset to Feature Access Codes (cannot change to Phone Buttons)
Set Feature Code	
Clear Feature Code	
Message Waiting Indicator Line	
MWI Line (DN)	
First DN (in the range of DNs used by the switch)	
Last DN (in the range of DNs used by the switch)	

Field	Data
Customer LAN TCP/IP information	
IP address	
Subnet mask	
Gateway	

Matra specific information for the Configuration Wizard

Field	Data
Hook Flash time	
Hunt group	
Number of channels (for this hunt group)	
Agent DN	
TermNum	
Customer LAN TCP/IP information	
IP address	
Subnet mask	
Gateway	

Additional data for Remote Access Service configuration (not part of the Configuration Wizard)

Field	Data
Administrator Password	
Current password	Default is abc123
New password	For security reasons, do not enter the new password in this table.
System Password (NGenSys)	
Current password	
New password	For security reasons, do not enter the new password in this table.
Distributor Password (NGenDist)	
Current password	
New password	For security reasons, do not enter the new password in this table.

Chapter 7

System overview

In this chapter

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CallPilot configurations

Introduction

CallPilot is available on three servers:

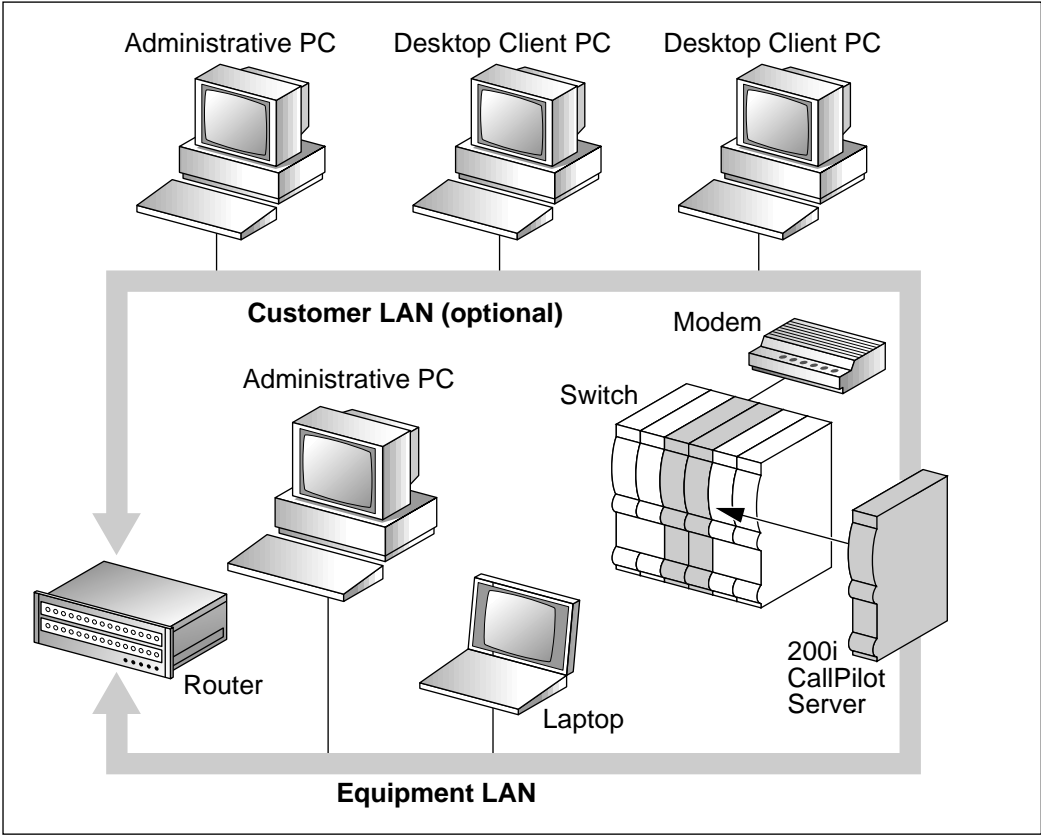
- 200i
- 702t
- 1001rp

CallPilot servers can be configured to work with the following switches:

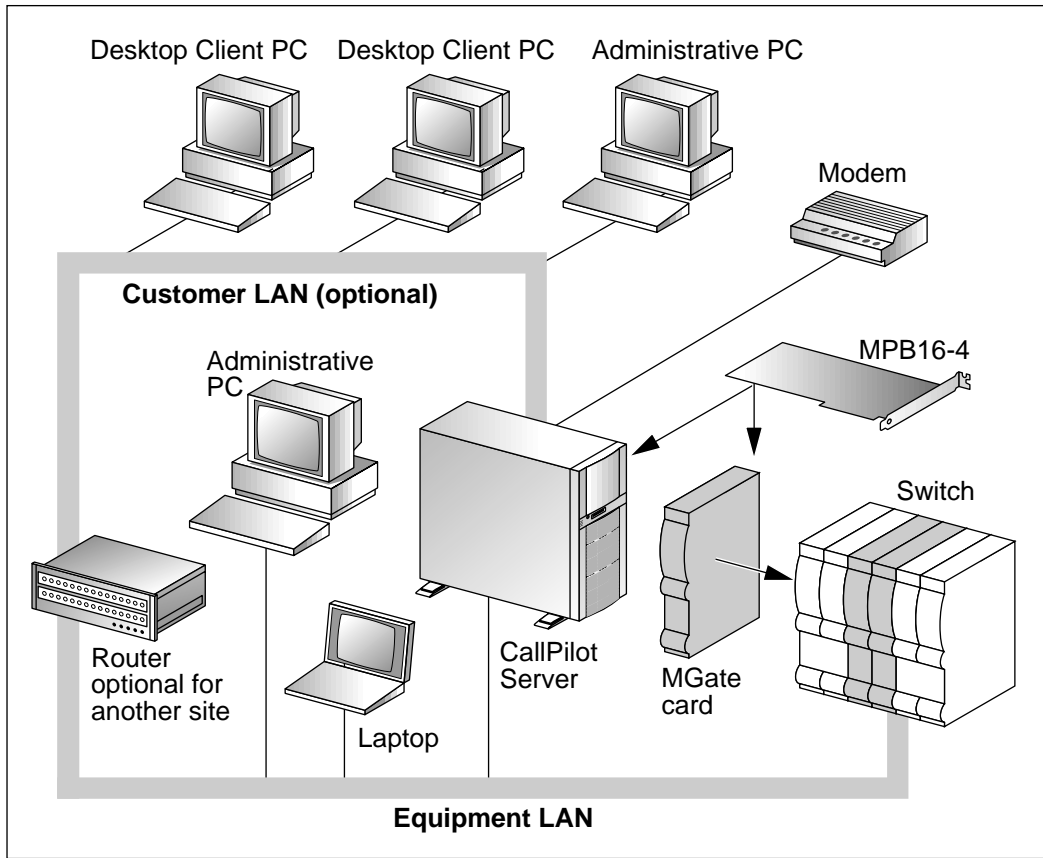
- M1
- DMS-100/MSL-100
- Lucent
- Matra
- Mitel
- Rolm

The following diagrams show these configurations.

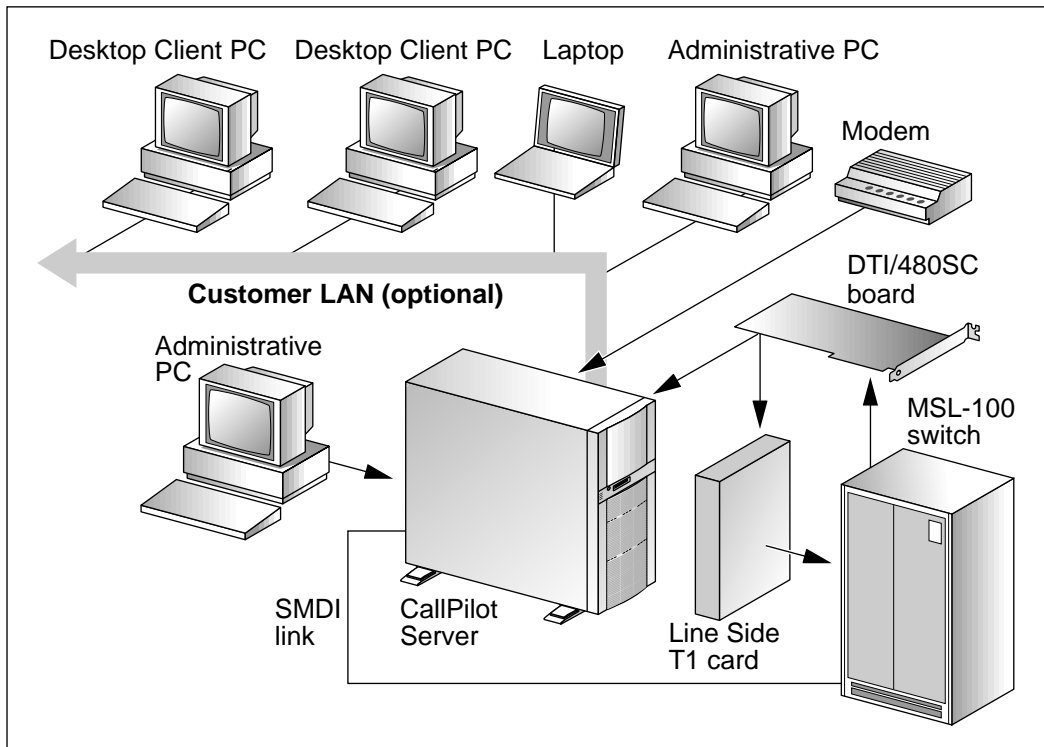
CallPilot 200i server connected to M1 Switch



G100894

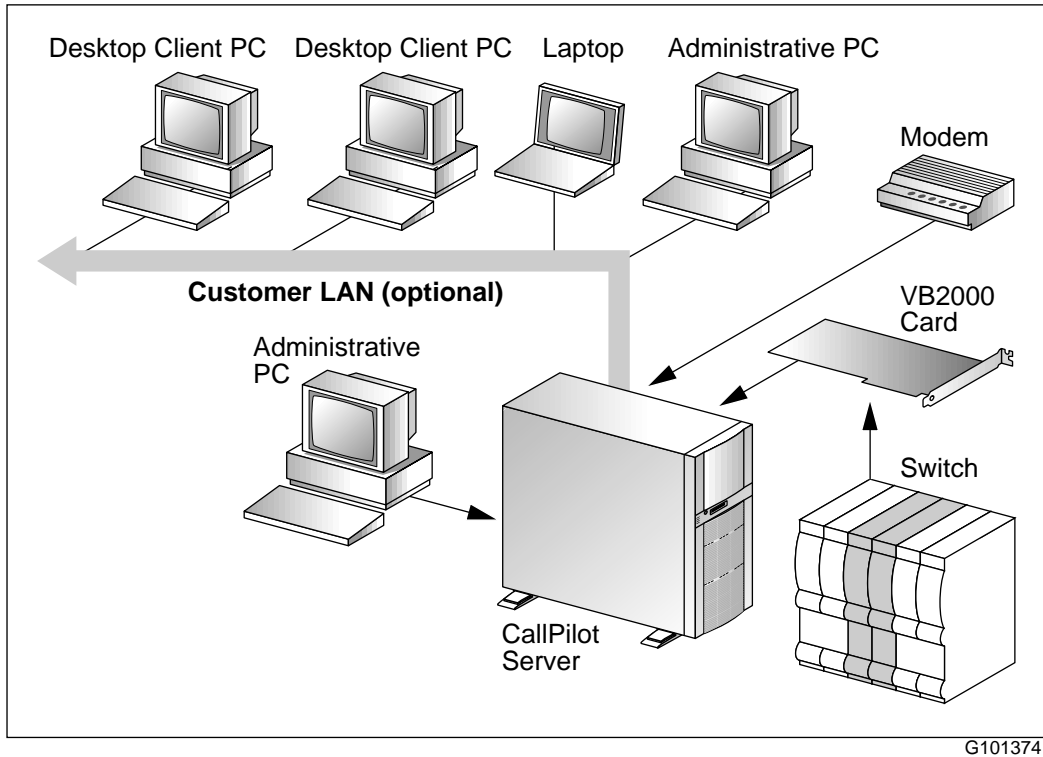
CallPilot tower or rack server connected to M1 Switch

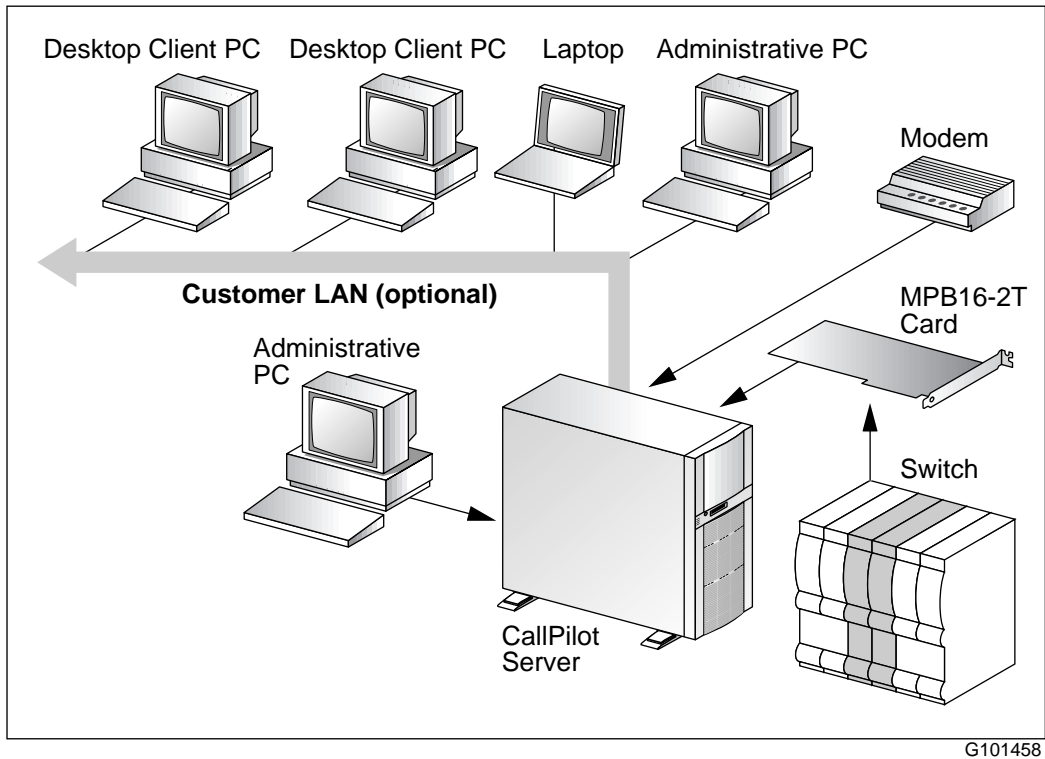
G100895

CallPilot tower or rack server connected to MSL-100 Switch

G101472

CallPilot tower or rack server connected to Lucent, Mitel, or Rolm switch



CallPilot tower or rack server connected to Matra switch

Glossary

A

AC

See alternating current.

ACD call

An automatic call distribution (ACD) call enters the system through one or more central lines, and then is presented to agents within the call center according to their skillsets and the services required by the caller.

adapter

Hardware required to support a particular device. For example, network adapters provide a port for the network wire. Adapters can be expansion boards or part of the computer's main circuitry.

administrator

A user who is responsible for maintaining the CallPilot server.

agent

A user who is responsible for accepting incoming calls.

agent ID

An identification number assigned to a particular agent. The agent uses this number when logging on. The agent ID is not associated with any particular phoneset.

AIP

Advanced I/O Processor

alternating current

AC electrical power, the raw power supplied by all utility companies, must be converted to direct current (DC) for use in computer systems.

American National Standards Institute

A voluntary organization (which includes all the large computer companies) that sets standards for the computer industry.

American Standard Code for Information Interchange

A code for representing English text as numbers, with each character assigned a number from 0-127. For example, the ASCII code for uppercase P is 80. ASCII code makes it possible to transfer data from one computer to another.

analog

The type of signal used by most telephone connections. A modem converts a digital (computer) signal to analog (and vice versa) so that the signal can travel through telephone lines.

ANSI

See American National Standards Institute.

API

See application program interface.

APIC

Advanced Peripheral Interrupt Controller

application

When used in reference to the CallPilot server, applications are used for the purposes of reporting. Information is collected and reported for applications to give call center managers specific details about call types, callers, or conditions. The master script, and each primary script, has an application with the same name. Applications are created automatically when the master script is activated for the master script and for every primary script that it references.

This term is also used to refer to a program that is run to do various types of work on a computer. Although applications carry out many functions, the user can see (and use) only the graphical user interface. Common applications include word processors, databases, and multimedia software.

application program interface

A set of routines, protocols, and tools that programmers use to develop software applications. APIs simplify the development process by providing commonly used programming procedures.

Application Specific Integrated Controller

A chip designed for a specific application. ASICs, created by connecting existing circuit building blocks in new ways, cost less and are much easier to produce than designing a brand new chip.

ASCII

See American Standard Code for Information Interchange.

ASIC

See Application Specific Integrated Controller.

associated supervisor

A supervisor who sees the data related to an agent. *See also* primary supervisor.

Asynchronous Transfer Mode

A network technology that uses start bits and stop bits (which identify a piece of digital code) to facilitate data transfer. ATM equipment can transmit video, audio, and computer data over the same network, ensuring that no single type of data dominates the line.

ATM

See Asynchronous Transfer Mode.

average required bandwidth

The amount of bandwidth that the Capacity Assessment Tool analysis determines is required for the CallPilot server recommended configuration. *See also* bandwidth.

B

bandwidth

The amount of data that the network can transmit, usually expressed in Mbytes per second. *See also* average required bandwidth.

baseboard

See motherboard.

Basic Input/Output System

Flash ROM-based code that runs the Power-On Self-Test (POST) and bootstrap loader. BIOS contains low-level access routines for hardware that might be called from DOS.

baud rate

Refers to signaling rate. The baud rate indicates the number of bits per second (bps) that are transmitted. For example, a baud rate of 300 means that 300 bits are transmitted each second (300 bps).

BIOS

See Basic Input/Output System.

bits

Short for binary digit, the smallest unit of information on a machine. A single bit can hold only one of two values: 0 or 1. A byte is composed of eight consecutive bits.

bits per second

The standard measure of data transmission speeds. Assuming asynchronous communication, which requires 10 bits per character, a baud rate of 300 bps translates to 30 characters per second (cps).

bps

See bits per second.

bridge

A protocol-independent device that connects two LANs or two segments of the same LAN. Bridges are faster (and less versatile) than routers because they forward packets without analyzing and rerouting messages.

bus

A collection of wires that connects the microprocessor and main memory to internal computer components. All buses consist of an address bus that transfers data and a data bus that transfers information about where the data should go.

In a network, a bus (also called the backbone) is a main cable that connects all devices on a LAN.

byte

Abbreviation for binary term, a unit of storage capable of holding a single character. On almost all modern computers, a byte is equal to eight bits. Large amounts of memory are indicated in terms of kbytes (1024 bytes), Mbytes (1 048 576 bytes), and Gbytes (1 073 741 824 bytes).

C

cache

A read cache attempts to anticipate and store required data in memory so that it can be retrieved quickly (electronically, rather than mechanically). A write cache electronically holds the data you want to write to disk and slowly writes it to the disk (mechanically).

card

A thin, rectangular plate on which chips and other electronic components are placed. Examples of cards include motherboards, expansion boards, daughterboards, controller boards, Network Interface cards, and video adapters.

cathode-ray tube

The technology used in most televisions and desktop computer display screens. A CRT works by moving a ray of electrons back and forth across the back of the screen, illuminating phosphor dots on the inside of the glass tube.

CDN

See Controlled Directory Number.

CD-ROM

A type of optical disk capable of storing large amounts of data (up to 1 Gbyte), although the most common size is 630 Mbytes. A single CD-ROM has the storage capacity of 700 floppy disks and is particularly well-suited to information that requires large storage capacity.

central processing unit

Sometimes referred to as the microprocessor, the CPU more often describes the system unit, the box that holds a PC's essential components (except keyboard and monitor).

chip

Typically, a chip refers to the small flake of silicon crystal that makes up the microprocessor or some other type of controller.

CLAN

Customer local area network

client

The client part of a client-server architecture. Typically, a client is an application that runs on a personal computer or workstation and relies on a server to perform some operations. For example, an e-mail client is an application that enables you to send and receive e-mail.

CMOS

See Complementary Metal-Oxide Semiconductor.

COM or COMM

Communications port. Usually refers to the Logical Device name of PC serial ports as defined by DOS.

Complementary Metal-Oxide Semiconductor

A commonly used type of semiconductor well-suited for use in battery-powered devices, such as portable computers, because they require less power than NMOS.

Controlled Directory Number

Allows incoming calls to be queued into the switch, and messages regarding these calls to be sent to the CallPilot server.

controller board

A special type of expansion board that contains a controller for a peripheral device. When you attach new devices, such as a disk drive, to a computer, often a controller board must also be added.

CPU

See central processing unit.

crash

A serious computer failure during which the computer stops working or a program closes unexpectedly. A crash indicates a hardware malfunction or a serious software bug.

CRT

See cathode-ray tube.

D

DAT

See digital audio tape.

data types

The types of data that you can use to create variables.

daughterboard

Usually used as a synonym for an expansion board, a daughterboard is any printed circuit board that directly or indirectly attaches to a motherboard.

DBMS

Database Management System

DC

See direct current.

DDS

See digital data storage.

desktop users

Users with the desktop assigned to them can access the system through a computer.

DHCP

See dynamic host configuration protocol.

digital audio tape

A type of magnetic tape that uses a helical scan scheme to record data. DDS (digital data storage) is the most common format for DAT cartridges.

digital data storage

DDS is the industry standard for 4 mm helical scan digital audio tape (DAT) cartridges. *See also* DAT.

digital linear tape

A high-capacity 1/2-inch streaming tape cartridge format.

digital signal processor

A special type of coprocessor that manipulates analog data, such as sound or photographs, that has been converted to digital form.

DIMM

The protective packaging for microprocessor chips that provides a safe and convenient means of installing and removing the chip.

DIP

A type of protective packaging for silicon memory chips that provides a safe and convenient means of installing and removing the chip.

DIP switch

A series of tiny switches built into circuit boards that enables you to configure a circuit board for a particular type of computer or application. DIP switches are always toggle switches, which means they have two possible positions: on or off (or 1 or 0).

direct current

DC, the electrical power used by computers, comes from a single source (such as a battery) that provides a single voltage that stays at a constant level. AC, the power provided by utility companies, must be converted to DC before it can be used in computer systems.

direct memory access

DMA speeds up system performance by moving blocks of memory around inside the computer (typically between I/O devices and memory). This process enables the microprocessor to spend its time performing other functions.

directory number

The number that identifies a telephone set on a PBX or in the public network. The directory number could be a local PBX extension (local DN), a public network telephone number, or an automatic call distribution directory number (ACD-DN)—the pilot or group number for an ACD queue.

Disk Operating System

Originally developed by Microsoft, DOS is the standard, IBM-compatible, 16-bit operating system. New operating systems (including Windows 95) do not rely on DOS.

display

The device you look at when you work with a computer, for example a CRT monitor (in desktop systems) or a liquid crystal display (in notebooks).

DLL

See dynamic link library.

DLT

See digital linear tape.

DMA

See direct memory access.

DN

See directory number.

DOS

See Disk Operating System.

driver

A program that controls a device. Every device, whether it is a printer, disk drive, or keyboard, must have a driver program. A driver acts like a translator between the device and programs that use the device.

DSP

See digital signal processor.

dual in-line memory module

The protective packaging for microprocessor chips that provides a safe and convenient means of installing and removing the chip.

dual in-line pin

A type of protective packaging for silicon memory chips that provides a safe and convenient means of installing and removing the chip.

dynamic host configuration protocol

A protocol for assigning dynamic IP addresses to devices on a network.

dynamic link library

A library of executable functions or data that can be used by a Windows application. Typically, a DLL provides one or more particular functions and a program accesses the functions by creating either a static or dynamic link to the DLL. A DLL can be used by several applications at the same time.

E

ECC

See error correction code.

ECP

See extended capabilities port.

EEPROM

See electronically erasable programmable read-only media.

EIDE

See enhanced IDE.

EISA

See extended industry standard architecture bus.

ELAN

Embedded local area network

electronically erasable programmable read-only media

A memory chip that needs only a higher than normal voltage and current to erase its contents. EEPROM can be erased and reprogrammed without taking them out of their sockets. EEPROM gives computers and their peripherals a means of storing data without the need for a constant supply of electricity.

EMI

Electromagnetic interference

enhanced IDE

An IDE hard disk interface enhanced with hardware and firmware changes to support disks larger than 540 Mbytes, four disks instead of two, and faster transfer rates. *See also* IDE.

enhanced parallel port

A parallel port standard for PCs that supports bidirectional communication between the PC and attached devices (such as a printer).

EPP

See enhanced parallel port.

error correction code

A scheme that can detect and fix single-bit memory errors without crashing the system. Also known as Error Detection and Correction (EDAC).

Ethernet

A widely used LAN protocol that uses a bus topology and supports data transfer rates of 10 Mbps.

expansion board

Any board that plugs into one of the computers expansion slots. Expansion boards include controller boards, LAN cards, and video adapters.

expansion bus

Enables expansion boards to access the microprocessor and memory. *See also* bus.

extended capabilities port

A parallel-port standard for PCs that supports bidirectional communication between the PC and attached devices (such as a printer).

extended industry standard architecture bus

A 32-bit bus that accommodates ISA PC boards.

F

FAT

See file allocation table.

FIFO

First in, first out

file allocation table

A table that the operating system uses to locate files on a disk.

FITS

Failures in ten to the ninth hours. The number of failures expected in one million hours.

G

gateway

Software or a computer running software that enables two different networks to communicate.

Gbyte

Two to the 30th power (1 073 741 824) bytes. One Gbyte is equal to 1024 megabytes.

general protection fault

A computer condition that causes a Windows application to crash. GPFs are commonly caused when one application attempts to use memory assigned to another application.

gigabyte

See Gbyte.

GPCP

General purpose computing platform

GPF

See general protection fault.

graphical user interface

What is seen on the monitor when a Windows application (or another noncommand-based application) runs. A graphical user interface uses features such as pointers, icons, I-beams, and menus to make the program easier to use.

GUI

See graphical user interface.

H

HAL

See hardware abstraction layer.

handshaking

A process involved in establishing a valid connection or signal between two pieces of hardware or communications software.

hardware abstraction layer

The software layer between the operating system and the hardware.

hub

A common connection point for all 10Base-T cables connected to a small network. A hub enables data to go from one device to another.

I

icon

A small picture that represents an object or program in a graphical user interface.

IDE

Commonly used to describe the AT attachment design, the dominant hard disk interface. IDE is a cost-effective interface technology for mass storage devices in which the controller is integrated into the disk or CD-ROM drive.

IEEE

See Institute of Electrical and Electronics Engineers.

INCA

See Interrupt and Control ASIC.

Industry Standard Architecture

A 16-bit standard interface for add-in cards.

input/output

Refers to any operation, program, or device that enters data into a computer or extracts data from a computer.

Institute of Electrical and Electronics Engineers

An organization of engineers, scientists, and students that develops standards for the computer and electronics industry.

interactive voice response

An application that allows telephone callers to interact with a host computer via prerecorded messages and prompts.

internetwork packet exchange

A networking protocol used by the Novell NetWare operating systems. Like UDP/IP, IPX is a datagram protocol used for connectionless communications. Higher-level protocols, such as SPX and NCP, are used for additional error recovery services.

inter-process communication

IPC enables one process to communicate with another process. It allows one application to control the other and permits several applications to share the same data without interfering with one another.

Also, a generic term for the communication of commands, events, or data between software processes.

Interrupt and Control ASIC

A special Intel chip used on the XXPRESS and AltServer platforms.

interrupt request

Hardware lines used by devices to send interrupt signals to the microprocessor, temporarily shifting program execution to another section of code. When a new device is added to a PC, often the IRQ number must be set to specify which interrupt line the device might use.

I/O

See input/output.

IP address

An identifier for a computer or device on a TCP/IP network. Networks use the TCP/IP protocol to route messages based on the IP address of the destination. The format of an IP address is a 32-bit numeric address written as four numbers separated by periods. Each number can be zero to 255. For example, 1.160.10.240 could be an IP address.

IPC

See inter-process communication.

IPX

See internetwork packet exchange.

IRQ

See interrupt request.

ISA

See Industry Standard Architecture.

ISO

International Standards Organization

IVR

See interactive voice response.

IVR ACD-DN

A directory number that routes a caller to a specific IVR application. An IVR ACD-DN must be acquired for non-integrated IVR systems.

J

jumper

A metal bridge that closes an electrical circuit. Typically, a jumper consists of a plastic plug that fits over a pair of protruding pins. Jumpers are sometimes used to configure expansion boards. By placing a jumper plug over a different set of pins, you can change a board's parameters.

K

kbyte

When used to describe data storage, a kbyte represent 1024 bytes. When used to describe data transfer rates, a kbyte represents 1000 bytes.

kilobyte

See kbyte.

L

LAN

See local area network.

LCD

Liquid crystal display

LED

Light-emitting diode

local area network

A computer network that spans a relatively small area. Most LANs connect workstations and personal computers and are confined to a single building or group of buildings. LANs can transmit data at very fast rates, but the distances are limited.

M

M1

Meridian 1 switch

MAT

Meridian Administration Tool

Mbyte

When used to described data storage, a megabyte represents 1 048 576 (2 to the 20th power) bytes. When used to described data transfer rates, as in Mbps, a megabyte represents one million bytes.

MCS

Multimedia communications systems

megabyte

See Mbyte.

megahertz

One MHz represents one million cycles per second.

Meridian Mail

A Nortel Networks product that provides voice messaging and other voice and fax services.

MHz

See megahertz.

motherboard

The principal board that has connectors for attaching devices to the bus. Typically, the motherboard contains the CPU, memory, and basic controllers for the system. On PCs, the motherboard is often called the system board.

MTA

See modular test architecture.

MTBF

Mean time between failures

N

NetBeui

See NetBIOS enhanced user interface.

NetBIOS

See Network Basic Input Output System.

NetBIOS enhanced user interface

An enhanced version of the NetBIOS protocol used by network operating systems such as LAN Manager, LAN Server, Windows for Workgroups, Windows 95, and Windows NT.

Network Basic Input Output System

An application programming interface (API) that augments the DOS BIOS by adding special functions for local area networks (LANs). Almost all LANs for PCs are based on the NetBIOS. Some LAN manufacturers have even extended it, adding additional network capabilities.

network interface card

An expansion board that enables a PC to be connected to a local area network (LAN).

network loop interface

A proprietary digital voice interface into the M1 used by Meridian Mail.

New Technology File System

The file system introduced as part of the Windows NT O/S.

NIC

See network interface card.

NLI

See network loop interface.

ns

nanosecond

NTFS

See New Technology File System.

NTLDR

Windows NT bootstrap loader program

NVRAM

Non-Volatile Random Access Memory

O

OA&M

Operations, administration, and maintenance

object linking and embedding

A compound document standard that enables you to create objects with one application and then link or embed them in a second application.

ODBC

See Open Database Connectivity.

OEM

Original equipment manufacturer

OLE

See object linking and embedding.

Open Database Connectivity

A Microsoft-defined database API standard.

Open System Interconnection

A worldwide communications standard that defines a framework for implementing protocols in seven layers.

OS

Operating Standard

OSA

Operating System Abstraction Layer

OSI

See Open System Interconnection.

P

parallel port

A parallel interface for connecting an external device such as a printer. Most personal computers have both a parallel port and at least one serial port.

parity

The quality of being either odd or even. The fact that all numbers have parity is commonly used in data communications to ensure the validity of data. This is called parity checking.

PBX

See private branch exchange.

PC

See personal computer.

PCEB

PCI to EISA Bus Controller

PCI

See Peripheral Component Interconnect Bus.

PCMCIA

See Personal Computer Memory Card International Association.

PCXB

PCI-to-press-bridge

Peripheral Component Interconnect Bus

A new 32- or 64-bit local bus standard for PCs.

personal computer

A computer having an architecture that is compatible with the IBM PC.

Personal Computer Memory Card International Association

An industry group dedicated to promoting the new PCMCIA/PC Card Standard (credit-card-sized peripherals for PCs).

phoneset attribute

An option that allows a user to log on to the system through a phoneset.

PIIX3

PCI-to-ISA/IDE/USB Subsystem

PLM

Product Line Management

PMC

PCI and Memory Controller

POST

See Power-On Self-Test.

Power-on self-test

Initializes and performs rudimentary tests on baseboard hardware, including CPU, floating point unit, interrupts, memory, real-time clock, video, auto-initializing PCI and EISA bus.

primary supervisor

The supervisor who is associated directly with the agent. When the agent hits the Emergency key on the phoneset, the call is presented to the agent's primary supervisor. The data related to the agent is associated with this supervisor.

private branch exchange

A telephone switch typically used by a business to service its internal telephone needs. A PBX usually offers more advanced features than are generally available on the public network. A PBX interfaces with the public network central office using circuits known as trunks.

protocol

An agreed-upon format for transmitting data between two devices. The protocol determines the type of error checking to be used, the data compression method (if any), how the sending device will indicate that it has finished sending a message, and how the receiving device will indicate that it has received a message.

R

RAID

See Redundant Array of Inexpensive Disks.

RAM

See random access memory.

RAN

Recorded announcement

random access memory

The most common type of memory found in computers and other devices, such as printers. The term RAM is usually synonymous with main memory, the memory available to programs. For example, a computer with 8 Mbyte RAM has approximately 8 million bytes of memory that programs can use.

ranking table

Defines how calls are routed to the sites on the network. A ranking table can be used as the sole mechanism for selecting the best site on the network to take a call.

RAS

See Remote Access Services.

read-only memory

Computer memory on which data has been prerecorded and cannot be removed.

real-time clock

A clock that keeps track of the time even when the computer is turned off. Do not confuse a computer's real-time clock with its CPU clock. The CPU clock regulates the execution of instructions.

Redundant Array of Inexpensive Disks

A category of disk drives that employs two or more drives in combination for fault tolerance and performance. RAID disk drives are used frequently on servers but are not generally necessary for personal computers.

registry

Windows NT central database for storing services, defaults, and so on.

Remote Access Services

A feature built into Windows NT that enables users to log on to an NT-based LAN using a modem, X.25 connections, or WAN link.

RFI

Radio frequency interference

RGB

Red, green, blue: an electrical interface to a video monitor.

ROM

See read-only memory.

route

Defines a group of trunks. Each trunk carries either incoming or outgoing calls to the switch.

router

A device that connects two LANs. Routers are similar to bridges but provide additional functionality, such as the ability to filter messages and forward them to different places based on various criteria.

RPM

Revolutions per minute

RTC

See real-time clock.

S

SCA

See single connector architecture.

SCM

See Service Control Manager.

SCO/Unix

A version of the UNIX operating system that runs on PCs.

SCSI

See Small Computer System Interface.

SCU

See Software Configuration Utility.

secondary supervisor

A supervisor who is available for an agent if the agent's primary supervisor is unavailable. *See also* primary supervisor.

Sequenced Packet Exchange

A transport layer protocol (layer 4 of the OSI Model) used in Novell Netware networks. The SPX layer sits on top of the IPX layer (layer 3) and provides connection-oriented services between two nodes on the network. SPX is used primarily by client/server applications.

serial port

A general-purpose interface that can be used for almost any type of device, including modems, mice, and printers (although most printers are connected to a parallel port). Most serial ports on personal computers conform to the RS-232C or RS-422 standards.

server

A computer or device on a network that manages network resources. Examples of servers include file servers, print servers, network servers, and database servers.

service

Process that adheres to a Windows NT structure and requirements. It provides system functionality.

Service Control Manager

A Windows NT process that manages the different services on the machine.

SIMM

Single In-line Memory Module

Simple Network Management Protocol

A set of protocols for managing complex networks. SNMP works by sending messages, called protocol data units (PDUs), to different parts of a network and then analyzing the responses.

single connector architecture

A method for supplying power and data lines in one connector on hard disks. Provides hot-swap capability.

Small Computer System Interface

A standard for connecting and controlling mass storage devices such as CD-ROMS, tape drives, and hard disks.

Small System Controller

The Small System Controller pack consists of the CPU, memory, network conference, and Ethernet controller.

SMI

System Management Interrupt

SNMP

See Simple Network Management Protocol.

Software Configuration Utility

A utility used to configure PCI and EISA cards. It can also set BIOS parameters.

SPX

See Sequenced Packet Exchange.

SRAM

Static Random Access Memory

stop bit

In asynchronous communications, a bit that indicates that a byte has just been transmitted. Every byte of data is preceded by a start bit and followed by a stop bit.

supervisor

A user who manages a group of agents.

SVGA

Super Video Graphics Adapter

switch

In networks, a device that filters and forwards frames, or packets of information.

switch resource

Devices that are configured on the switch through overlays.

system pack

A logical drive created from two or more physical hard disks using the RAID DAC960 software configuration utility.

T

TCP/IP

See Transport Control Protocol/Internet Protocol.

telephony

The science of translating sound into electrical signals, transmitting them, and then converting them back to sound. The term is used frequently to refer to computer hardware and software that performs functions traditionally performed by telephone equipment.

token ring

A PC network protocol developed by IBM. A token-ring network is a type of computer network in which all the computers are arranged (schematically) in a circle.

Transport Control Protocol/Internet Protocol

The suite of communications protocols used to connect hosts on the Internet. TCP/IP is the standard for transmitting data over networks.

trunk

A communications link between a PBX and the public central office, or between PBXs. There are various trunk types that provide services such as Direct Inward Dialing (DID trunks), ISDN, and Central Office connectivity.

TTL

Transistor-transistor logic

U

unicode

A worldwide 16-bit character-encoding standard that allows text to be displayed in a wide choice of international languages.

uninterruptible power supply

A power supply that includes a battery to maintain power in the event of a power outage. Typically, a UPS keeps a computer running for several minutes after a power outage, enabling you to save data that is in RAM and shut down the computer safely.

UPS

See uninterruptible power supply.

utility

A program that performs a very specific task, usually related to managing system resources. Operating systems contain a number of utilities for managing disk drives, printers, and other devices.

V

VGA

See video graphics adapter.

video adapter

An expansion board that contains a controller for a graphics monitor.

video graphics adapter

A standard video interface for computers.

voice port

A channel within an IVR system. A voice port is defined as a 2500 phoneset for third-party IVR systems or as an RCS (517 or 2009) phoneset for Meridian Mail.

W

WAN

See wide area network.

wide area network

A computer network that spans a relatively large geographical area. Typically, a WAN consists of two or more local area networks (LANs). The largest WAN in existence is the Internet.

Win32

A 32-bit API used to access the Windows operating system.

workload scenarios

The workload scenarios define typical patterns of system operations and are not directly related to the various hardware configurations of the system. There are five typical workload scenarios (entry, small, medium, large, and upper end) that are used in performance evaluation for CallPilot.

X**XBUS**

Two parallel bus structures, one for DMA-compatible devices, and one for memory devices that do not support DMA cycles. XBUS connects the real-time clock, flash memory, NVRAM, and keyboard/mouse controller.

Z**zero insertion force**

A type of socket.

ZIF

See zero insertion force.

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CallPilot

Installation and Configuration

Part 1: Installation Flowchart and Worksheets

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